Score = 1122 bits (2870), Expect = 0.0
Identities = 548/549 (99%), Positives = 548/549 (99%)

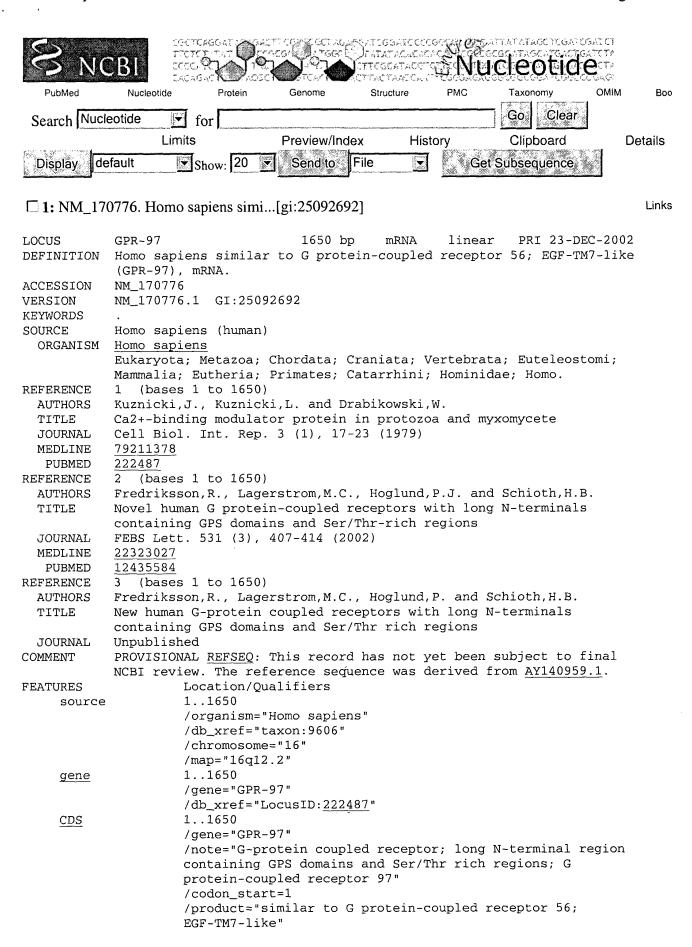
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Sbjct:	361	MKDEDKPPDRVRLPKSLFRSLPGNRSVVRLAVTILDIGPGTLFKGPRLGLGDGSGVLNNR	540
Query:	181	LVGLSVGQMHVTKLAEPLEIVFSHQRPPPNMTLTCVFWDVTKGTTGDWSSEGCSTEVRPE LVGLSVGOMHVTKLAEPLEIVFSHORPPPNMTLTCVFWDVTKGTTGDWSSEGCSTEVRPE	240
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Query:	241	GTVCCCDHLTFFALLLRPTLDQSTVHILTRISQAGCGVSMIFLAFTIILYAFLRLSRERF GTVCCCDHLTFFALLLRPTLDQSTVHILTRISQAGCGVSMIFLAFTIILYAFLRLSRERF	300
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Query: 481 GLSSLVGVTWGLAIFTPLGLSTVYIFALFNSLQGVFICCWFTILYLPSQSTTVSSSTARL 540

Sbjct: 1441GLSSLVGVTWGLAIFTPLGLSTVYIFALFNSLQGVFICCWFTILYLPSQSTTVSSSTARL 1620

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ELSEVIER SCIENCE FULL-TEXT ARTICLE

Novel human G protein-coupled receptors with long N-terminals containing GPS domains and Ser/Thr-rich regions.

Fredriksson R, Lagerstrom MC, Hoglund PJ, Schioth HB.

Department of Neuroscience, Uppsala University, BMC, Box 593, 751 24, Uppsala, Sweden.

We report eight novel members of the superfamily of human G protein-coupled receptors (GPCRs) found by searches in the human genome databases, termed GPR97, GPR110, GPR111, GPR112, GPR113, GPR114, GPR115 and GPR116. Phylogenetic analysis shows that these are additional members of a family of GPCRs with long N-termini, previously termed EGF-7TM, LNB-7TM, B2 or LN-7TM. Five of the receptors form their own phylogenetic cluster, while three others form a cluster with the previously reported HE6 and GPR56 (TM7XN1). All the receptors have a GPS domain in their N-terminus and long Ser/Thr-rich regions forming mucin-like stalks. GPR113 has a hormone binding domain and one EGF domain. GPR112 has over 20 Ser/Thr repeats and a pentraxin domain. GPR116 has two immunoglobulin-like repeats and a SEA box. We found several human EST sequences for most of the receptors showing differential expression patterns, which may indicate that some of these receptors participate in reproductive functions while others are more likely to have a role in the immune system.

## MeSH Terms:

- Amino Acid Sequence
- GTP-Binding Proteins/metabolism\*
- Human
- Molecular Sequence Data
- Phylogeny
- Receptors, Cell Surface/metabolism\*
- Receptors, Cell Surface/chemistry
- Sequence Homology, Amino Acid
- Serine/chemistry\*
- Support, Non-U.S. Gov't
- Threonine/chemistry\*

## Substances:

- GTP-Binding Proteins
- Threonine
- Serine
- Receptors, Cell Surface

PMID: 12435584 [PubMed - indexed for MEDLINE]



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